

Personal Details

Mohamed Ayoub Ismail Ali

- **Date & Place of birth:** 1.1.1957-Singa, Sudan
- **Nationality:** Sudanese
- **Marital Status:** Married with three children
- **Languages:** Arabic and English
- **Address:** Agricultural Training and Community Development Unit (ATCDU), Faculty of Agriculture, U. of K.,

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- **Present Title:** Associate Professor
- **Present Position :** Head, ATCDU- Faculty of Agriculture, University of Khartoum

Education

- **1964 – 1968:** Assabonabei Preliminary School
- **1968 -1973:** Abu Hujar General Secondary School
- **1973 – 1976:** Sinnar Higher Secondary School
- **1976 – 1977:** University of Khartoum-Faculty of Science, Khartoum, Sudan
- **1977 – 1981:** University of Khartoum-Faculty of Agriculture, Khartoum, Sudan
- **1983- 1987:** University of Khartoum-Graduate College, Khartoum, Sudan
- **1991 – 1995:** Cranfield University-Silsoe College, UK

Qualifications

- **B.Sc. (Agric.) Honours, Class One.** Major Subject: Agricultural Mechanization, Faculty of Agriculture, University of Khartoum, Sudan (May 1981). Awarded the Prize of Serkies Izmerilian (formerly John Deere Co. Agent in Sudan) for the Best Final Student (the firstout of 47 students) in Agricultural Mechanization Option.
- **M.Sc. (Agric.).** Major Subject: Agricultural Processing Engineering, Graduate College, University of Khartoum, Sudan (March 1987).

Dissertation: Determination of the Equilibrium Moisture Content (EMC) for Two Varieties of Groundnut

- **Ph.D.** Major Subject: Agricultural Processing Engineering, Silsoe College, Cranfield University, UK (July 1995).

Dissertation: Heat and Mass Transfer in Wheat Stored in a Simulated Sealed Pit

Research Areas of Interest

- Controlling environmental factors inside farm structures (greenhouses, animal barns, storage buildings...etc).
- Preservation of farm products by using techniques such as drying, cooling, freezing, canning...etc.
- Agricultural processing activities such as mechanical oil extraction, shelling of nuts, grinding...etc.
- Renewable energy sources.

Working Experience

5.1 ADMINISTRATIVE DUTIES:

- Agricultural Engineer, Former Blue Nile Agric. Corporation (1981 – 1982).
- Secretary of the Department Board, Department of Agric. Engineering, Faculty of Agriculture, University of Khartoum (1995 – 1996).
- Head, Dept. of Computer, Administration of University Requirements, University of Khartoum (1998 – 1999).
- Dean Deputy Assistant for Examinations Affairs, Faculty of Agriculture, University of Khartoum (1999 – 2000).
- Head, Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum (2001 – 2005).

- Head, Agricultural Training and Community Development Unit (ATCDU), Faculty of Agriculture, University of Khartoum (2005 – Present). During this period as a Head of the ATCDU I have been honoured by supervising the process of preparing about 160 B.Sc. courses of the Faculty of Agriculture, University of Khartoum into PowerPoint Slides form.

5.2 ACADEMIC DUTIES:

- Teaching assistant, Dept. of Agric. Eng., College of Agric. Studies, Khartoum Polytechnic (Now Sudan University for Sciences and Technology), Sudan (1986 – 1987).
- Teaching assistant, Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum, Sudan (1987 – 1991).
- Assistant Professor, Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum, Sudan (1995 – Present).

Teaching

1. Teaching practical classes in agricultural engineering for B.Sc. students at the Dept. of Agric. Engineering, Faculty of Agriculture, University of Khartoum (1984 – 1991) and at the Dept. of Agric. Eng., College of Agric Studies, Khartoum Polytechnic (Now Sudan University for Sciences and Technology), Sudan (1985 – 1989). The taught courses included the following:

- Farm power
- Farm machinery
- Agricultural processing
- Environmental control of farm structures
- Irrigation and drainage

2. Teaching the following undergraduate courses for B.Sc. students at the Faculty of Agriculture and other faculties of Shambat Campus, University of Khartoum (1995 – Present):

- Heat transfer and thermodynamics
- Environmental control of farm structures
- Food process engineering
- Renewable energy sources
- General physics-heat

- Computer basics

- Computer applications

3. Teaching the following postgraduate courses for M.Sc. for students at the Faculty of Agriculture, University of Khartoum (1998 – Present):

- Advanced environmental control of farm structures

- Agric. processing engineering

- Experimental design and statistical analysis

- Advanced computer applications

4. Teaching the following lectures and practical classes for the staff members of most of the Sudanese universities at the Staff Development Centre, University of Khartoum (2005 – Present):

- Teaching Technologies (2 – 4 h)

- Advanced computer applications (4 – 8 h)

5.4 SUPERVISION OF POSTGRADUATE STUDENTS:

1. SUPERVISION AS A MAIN SUPERVISOR WITH AWARDED M.Sc. DEGREE:

- **Igbal Ahmed Mohamed Zein:** Temperature Variation in Stored Sorghum (1997).

- **Mahasin Hussein Abdalla:** Effect of Different Methods of Drying, Speed of Whitening machine and Moisture Content on Rice Breakage (1998).

- **Sumaya Hassan Abdel Rahim:** Design of an Individual Water Drinker and Study of Some Environmental Factors on Broilers Performance (1998).

- **Itmad Awad El Hassan:** Effect of Processing Variables on Oil Expression Efficiency and Quality of Mechanically Expressed Balanits Oil (1998).

- **Omer El Mahi Mohamed Osman:** Heat Transfer in Sorghum Stored in an Underground Pit (1998).

- **Omyama Hamed Ali Nasir:** Determination of Equilibrium Moisture Content (EMC) for Two Varieties of Gum Arabic (1999).

- **Hanadi Abdel Gadir Yousuf:** Mechanical Expression of Oil from Sunflower Seeds (1999).

- **Nur El Dyem Mukhtar Osman:** Study of Storage Conditions and Stacking Load on Gum Arabic Quality (2000).

- **Yassir Atta El Manan Ali:** Effect of Compressive Force on Sweet Melon Fruits (2000).
- **El-Amin Omda Mohamed:** Construction and Performance Testing of a Forced Convective Solar Dryer (2000).
- **Eman Abdu Abdalla:** Determination of Some Factors Affecting Storage of Faba Bean (*Vicia faba* L.) (2001).
- **Ali Osman Abdel Rahim:** Study of Some Processing Factors Affecting Date Kernels Grinding (2002).
- **Mohammed El Magzoub Mohammed El Mobarak:** Drying Characteristics of Lemon (2002).
- **Mahasin Hassan Mohamed Ali:** Solar Energy Utilization for Thermal Disinfestation of Grain Sorghum (2003).
- **Sahar Jaafar Ahmed:** Determination of Equilibrium Moisture Content of Roselle (*Hibiscus sabderiffa* L.) Calyx (2003).
- **Elrasheed Isamil Yahia:** Construction and Testing of a Natural Convective Solar Dryer for Drying Meat (2004).
- **Babikir Ali Abakr:** Determination of Equilibrium Moisture Content (EMC) of Gum Arabic Powder (2004).
- **Rihab Ahmed Mohammed Kheir:** Mathematical Modelling of Heat Transfer in a Greenhouse (2005).
- **Salma Mohamed Ahmed Mohamed:** Production and Use of Biogas in a Modified Internal Combustion Diesel Engine (2006).
- **Dalal Ezaldeen Adel Rhman Algapani:** Determination of the Sterilization Time of Canned Peas (*Pisum Sativum* L.) at Saeed Factory Khartoum North, Sudan (2007).
- **Marwa Elhadi Hag Ali:** Evaluation and Improvement of Conventional Method of Onion Storage in Gezira Area (2007).
- **Ebtihal Mohammed Ibn Idriss:** Modelling of Thin Layer Solar Drying of Okra (*Abelmoschus esculentus* L.) Pods (2007).
- **Khalid Osman Elmussaad:** Layer Performance as Affected by Some Environmental Factors (2007).
- **Omima Ali Ahmed Gasm Elseed:** Moisture Equilibria of Gum Arabic (*Acacia Senegal* L.) Nodules (2008).
- **Omnia Eltigani Elzaki:** Mathematical Modelling of Solar Drying of Banana (*Musa* spp. L.) Slices in Thin Layers
- **Luna Salah Bayoumei:** Construction and Performance Testing of a Solar Distiller.

- **Suzan Mohamed Salih:** Modelling Thin layer Solar Drying of Guava (Psidium guajava L.) Slices.
- **Murawa Saad Omer:** Modelling Heat Transfer in Wheat Stored in a Metallic Silo.

2. SUPERVISION AS A CO-SUPERVISOR WITH AWARDED M.Sc. DEGREE:

- **Mohamed Ahmed Mohamed Ahmed:** Utilization of Solar Energy for Control of Stored Grain Insect Pests in Wheat and its Effect on Quality (1999).
- **Hagir Elhadi Yousuf:** Study of Some Aspects Affecting Postharvest Operations on Wheat (1999).
- **Afaf Ahmed Eltayeb :** Some Non-Chemical Methods of Preserving Sorghum Grain Quality During Storage (2000).

3. SUPERVISION AS A MAIN SUPERVISOR WITH AWARDED Ph.D. DEGREE:

- **Nur El Dyem Mukhtar Osman:** Mathematical Modelling of Temperature Distribution within Gum Arabic Stored in Jute Sacks (2002).
- **Amel Ahmed Elmamoun Ayoub:** Mathematical modelling of Solar Drying of Tomato Slices (2006).
- **El-Amin Omda Mohamed:** Mathematical modelling of Solar Drying of Mango Slices (2007).
- **Omer Elmahi Mohamed Osman:** Modelling Moisture in Sorghum Stored in a Metallic Silo (2007).
- **Fatima Ezzeldeen Mohamed Osman:** Evaporative Cooling Storage of Some Vegetables (2008).
- **Abdelmoniem Osman Mohamed:** Mathematical Modelling of Thin layer Solar Drying of Bayad (Bagrus bayad) Flakes (2008).

4. M.Sc. DEGREE SUPERVISION IN PROGRESS:

- **Anas Elzein Abdel Gadir** Investigation of Some Processing Factors Affecting Balanits Nuts Shelling.
- **Nuha Mohammed Abdel Elkhier:** Controlling Some Environmental Factors on Cucumber Growth Grown inside a Greenhouse.

5. Ph.D. DEGREE SUPERVISION IN PROGRESS:

- **Sahar Jaafar Ahmed:** Mathematical Modelling and Experimental Validation of a Greenhouse Performance with Evaporative Cooling System.
- **Sumaya Hassan Abdel Rahim:** Modelling Mechanical Oil Expression of Sesame (Sesamum indicum) Seeds.
- **Zeinab Ahmed Abdelhameed:** Mathematical Modelling of Thin layer Solar Drying of Hashab (Acacia Seyal L.) and Talha (Acacia senegal L.) Gum Arabic.

- **Eman Abdu Abdalla:** Sorption Equilibria of Sorghum (*Sorghum bicolor* L.)
- **Eltayeb Elsiddig El-imam:** Solar Drying of Groundnut (*Arachis hypogaea* L.) Kernels.

Training

6.1-ATTENDED COURSES AS A TRAINEE:

- Training course on “**Electronic Production of Agricultural Documents and Web Databases (WEBAGRIS)**” from 19/9 – 30/9/2004 at ICARDA headquarters, Aleppo, Syria.
- Training course on “**Knowledge Management Infrastructure Using Modern Library Management System**” from 19/11 – 30/11/2006 at ICARDA headquarters, Aleppo, Syria.
- Training course on “**Role of Digital Library in Dissemination of Knowledge**” from 18/3 – 26/3/2007 at AOAD headquarters, Khartoum, Sudan.
- Training course on “**Using Modern ICT in Library and Information Management Systems**” from 21/10 – 1/11/2007 at ICARDA headquarters, Aleppo, Syria.

6.2-ORGANIZED COURSES AS AN INSTRUCTOR:

- Training course on **Management, Technology and Sources of Agricultural Information**. The course was held during July – August 2005 at the ATCDU, Faculty of Agriculture, University of Khartoum, Sudan in collaboration between the Faculty and the General Directorate, Ministry of Higher Education and Scientific Research. About 120 of the staff members and librarians from 26 faculties of the agricultural sector of the Sudanese universities (Agriculture, Veterinary, Animal Production, Forestry and Natural Resources) participated in the training course.
- Teaching courses on **Teaching Technologies and Advanced Computer Applications** since 2005 till now. The courses were held at the Staff Development Centre, University of Khartoum, Sudan. About more than 1000 of the staff members of most of the Sudanese universities participated in these training courses.
- Training course on **Management and Sources of Information on the Internet**. The course was held during Jan. – Feb. 2007 at the College of Engineering, Nile Valley University, Atbara, Sudan. About 60 of the staff members and librarians from the Nile Valley University participated in the training course.
- Training course on **Environmental Control of Greenhouses**. The course was held during Dec. 2008 at the Faculty of Agriculture, University of Khartoum, Sudan. About 40 of agricultural engineers from the Ministry of Agriculture, Khartoum State, Sudan participated in the training course.

7. ACADEMIC AND PROFESSIONAL MEMBERSHIPS:

- Silsoe College Graduates Association, Silsoe College, Cranfield University, UK
- The Sudanese Agricultural Engineers Union
- The Sudanese Agricultural Council

Publications

8.1-PAPERS IN REFEREED SCIENTIFIC JOURNALS:

- Hummeida M.A. and **Ismail M.A.** (1989). Determination of the equilibrium moisture content (EMC) for two varieties of groundnuts. **Agric. Mechanization in Asia, Africa and Latin America (AMA)**, vol 20(3): 53-58 (Japan).
- **Ismail, M.A.**, Douglass, M.P. and Stenning, B.C. (2008). Modelling and simulation **heat transfer** in wheat stored in a simulated sealed pit. **International Journal of Food Engineering**, vol 4(1): 20 p., (www.bepress.com/ijfe/vol4/iss1/art3), (USA).
- **Ismail, M.A.**, Douglass, M.P. and Stenning, B.C.(2008). Modelling and simulation **moisture transfer** in wheat stored in a simulated sealed pit. **International Journal of Food Engineering**, vol 4(3): 24 p., (www.bepress.com/ijfe/vol4/iss3/art9), (USA).
- Mohamed, A.O., **Ismail, M.A.**, Luecke, W., Ahmed, A.E. (2008). Combined effect of drying temperature and time on drying kinetics and colour change of mango slices. **Biosystems Engineering**, xxx: xxx – xxx (UK) (submitted).
- Mohamed, A.O., **Ismail, M.A.**, Luecke, W., Ahmed, A.E. (2008). Desorption and adsorption characteristics of mango fruit moisture sorption isotherms of mango fruit. **Biosystems Engineering**, xxx: xxx – xxx (UK). (submitted).
- **Ismail, M.A.**, Ibn Idriss, E.M. (2008). Mathematical modelling of thin layer solar drying of okra (*Abelmoschus esculentus* L.) pods. **Journal of Food Engineering**, xxx: xxx – xxx (USA). (submitted).

8.2-PAPERS IN CONFERENCE PROCEEDINGS:

- Mohamed, A.O., **Ismail, M.A.**, Luecke, W., Ahmed, A.E. (2007). Design and construction of a solar dryer for mango slices. **Proceedings of International Research on Food Security, Natural Resource Management and Rural Development-Tropentag 2006**, October 11-13, 2006, University of Bonn, Bonn, Germany.

<http://www.tropentag.de/2006/proceedings/node275.html#6802>